Appl. No. 10/645,699
Amdt. dated February 28, 2008
Amendment under 37 CFR 1.116 Expedited Procedure
Examining Group 2162

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Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in this application. Added text is indicated by underlining, and deleted text is indicated by strikethrough. Changes are identified by a vertical bar at the left edge of text.

Listing of Claims:

1   1.   (currently amended) A computer system comprising a first network, a

2   first computer connected to the first network, a second network connected to the first network,

3   and a second computer and a third computer connected to the second network, the first computer

4   comprising:

5   a communication interface for connecting the first computer to the first network;

6   a disk storage device for storing data;

7   a disk interface for communicating data with the disk storage device;

8   a CPU for controlling the first computer; and

9   a memory for storing data and program code for operating the CPU,

10   wherein the program code includes:

11   a module for recording situations of access to a file stored in the disk

12   storage device from the third computer, the module being executed by the CPU at

13   predetermined intervals, and

14   wherein the program code is executed depending on the access situation, the

15   program code further including:

16   a module for searching the second network connected to the third

17   computer;

18   a module for searching a candidate for migration for the second network;

19   a module for designating the file as the candidate for migration to the

20   second computer;

21   a module for transmitting a migrator acceptor search packet to the second

22   computer for inquiring whether or not the second computer can accept the file;

23   a module for receiving a reply packet from the second computer as a

24   response to the migrator acceptor search packet;

25   a module for transmitting an advertisement packet to the third computer

26   either after or before the file is transferred to the second computer, the advertisement

27   packet indicating that the file is transferred to the second computer;

28   a module for transferring the file to the second computer;

29   a module for storing information indicative of whether the file has been

30   transferred to the second computer or the file exists in the first computer;

31   a module for storing a path name for the second computer when the file

32   has been transferred to the second computer; ~~and~~

33   a module for allowing the third computer to access the file via the first

34   computer based on the information and the path name when the first computer receives

35   an access request for the file after the file has been transferred to the second computer;

36   ~~and~~

37   a module for receiving a return request packet from the second computer

38   and issuing a read request in response, for returning the file to the first computer; and

39   a module for receiving and storing the file in the first computer, when the

40   file is returned from the second computer.

1   2.   (previously presented) The computer system according to claim 1,

2   wherein:

3   the memory stores a path of the file accessed by the third computer

4   associating the path with information on the access situations of the third computer, and

5   the program code further includes a module for designating the file

6   corresponding to the access situation information as the candidate for migration when the

7   information satisfies a predetermined condition.

1   3.   (canceled).

1   4.   (currently amended) The computer system according to claim 2, wherein

2   the third computer comprises a memory for storing data and program code, and

3   the program code in the memory of the third computer includes a module for

4   receiving the advertisement packet and a module for making access to the second computer for

5   the file according to the advertisement packet.

1   5.   (previously presented) The computer system according to claim 1,

2   wherein:

3   the first network is further connected to a third network, and

4   the program code further includes a module for transmitting the migrator acceptor

5   search packet to the third network when no computer suitable for accepting the file is found in

6   the second network.

           6-8.   (canceled)

1   9.   (currently amended) A first computer which is connected to a first

2   network capable of communicating with a second network including a second computer and a

3   third computer and which has a file accessed by the third computer, comprising:

4   a communication interface for connecting the first computer to the first network;

5   a CPU for controlling the first computer;

6   a disk storage device for storing data;

7   a disk interface for communicating data with the disk storage device; and

8   a memory for storing data and program code for operating the CPU,

9   wherein the program code includes:

10   a module for recording situations of access to a file stored in the disk

11   storage device from the third computer, and

12   wherein the program code is executed depending on the access situation, the

13   program code further including:

14   a module for searching the second network connected to the third

15   computer;

16   a module for searching a candidate for migration for the second network;

17   a module for designating the file as the candidate for migration to the

18   second computer;

19   a module for transmitting a migrator acceptor search packet to the second

20   computer for inquiring whether or not the second computer can accept the file;

21   a module for receiving a reply packet from the second computer as a

22   response to the migration admittance packet;

23   a module for transmitting an advertisement packet to the third computer

24   either after or before the file is transferred to the second computer, the advertisement

25   packet indicating that the file is transferred to the second computer;

26   a module for transferring the file to the second computer

27   a module for storing information indicative of whether the file has been

28   transferred to the second computer or the file exists in the first computer;

29   a module for storing a path name for the second computer when the file

30   has been transferred to the second computer;

31   a module for allowing the third computer to access the file via the first

32   computer based on the information and the path name when the first computer receives

33   an access request for the file after the file has been transferred to the second computer;

34   ~~and~~

35   a module for receiving a return request packet from the second computer

36   and issuing a read request in response, for returning the file to the first computer; and

37   a module for receiving and storing the file in the first computer, when the

38   file is returned from the second computer.

1   10.   (canceled)

1   11.   (canceled).

1   12.   (currently amended) A program stored in a memory of a first computer

2   which is connected to a first network capable of communicating with a second network including

3   a second computer and a third computer and which has a file accessed by the third computer,

4   comprising:

5   a first subroutine and a second subroutine,

6   wherein the first subroutine includes a module for recording situations of access

7   to the file of the first computer from the third computer, and

8   wherein the second subroutine is executed depending on the access situation, the

9   second subroutine including:

10   a module for searching the second network connected to the third

11   computer;

12   a module for searching a candidate for migration for the second network;

13   a module for designating the file as the candidate for migration to the

14   second computer;

15   a module for transmitting a migrator acceptor search packet to the second

16   computer for inquiring whether or not the second computer can accept the file;

17   a module for receiving a migration admittance packet from the second

18   computer as a response to the migration admittance packet;

19   a module for transmitting an advertisement packet to the third computer

20   either after or before the file is transferred to the second computer, the advertisement

21   packet indicating that the file is transferred to the second computer;

22   a module for transferring the file to the second computer;

23   a module for storing information indicative of whether the file has been

24   transferred to the second computer or the file exists in the first computer;

25   a module for storing a path name for the second computer when the file

26   has been transferred to the second computer;

27   a module for allowing the third computer to access the file via the first

28   computer based on the information and the path name when the first computer receives

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29   an access request for the file after the file has been transferred to the second computer;

30   and

31   a module for receiving a return request packet from the second computer

32   and issuing a read request in response, for returning the file to the first computer; and

33   a module for receiving and storing the file in the first computer, when the

34   file is returned from the second computer.

1   13.   (canceled)

1   14.   (previously presented) The computer system according to claim 1,

2   wherein the program code further includes a module for transferring a directory belonging to the

3   file to the second computer.

1   15.   (previously presented) The computer system according to claim 1,

2   wherein the program code further includes a module for transmitting the path name when the

3   first computer receives an access request for the file.

1   16.   (previously presented) The computer system according to claim 1,

2   wherein the file is stored into the second computer when the file is transferred from the first

3   computer to the second computer.

1   17.   (previously presented) The computer system according to claim 1,

2   wherein the file is returned from the second computer to the first computer depending on another

3   access situation.

1   18.   (previously presented) The computer system according to claim 17,

2   wherein the program code further includes a module for deleting the path name when the file is

3   retuned from the second computer to the first computer.

1   19.   (previously presented) The computer system according to claim 1,

2   wherein the module for transferring the file to the second computer is performed if the response

3   indicates that the second computer accepts the file and the second computer has a capacity for

4   storing the file.

1   20.   (previously presented) The computer system according to claim 1,

2   wherein the first computer transfers the file to the second computer, according to the access

3   request for the file or according to reduction of an amount of the access packet, after the

4   advertisement packet is sent.

1   21.   (new) A method of operating a computer system server comprising a first

2   computer connected to a first network through a communication interface, such that a second

3   network is connected to the first network and such that second and third computers are connected

4   to the second network, the method comprising:

5   recording situations of access from the third computer to a file stored in a disk

6   storage device that communicates with the first computer through a disk interface, the recording

7   of situations of access being executed at predetermined intervals depending on the access

8   situation;

9   searching the second network connected to the third computer;

10   searching a candidate for migration for the second network;

11   designating the file as the candidate for migration to the second computer;

12   transmitting a migrator acceptor search packet to the second computer for

13   inquiring whether or not the second computer can accept the file;

14   receiving a reply packet from the second computer as a response to the migrator

15   acceptor search packet;

16   transmitting an advertisement packet to the third computer either after or before

17   the file is transferred to the second computer, the advertisement packet indicating that the file is

18   transferred to the second computer;

19   transferring the file to the second computer;

20   storing information indicative of whether the file has been transferred to the

21   second computer or the file exists in the first computer;

22   storing a path name for the second computer when the file has been transferred to

23   the second computer; and

24   allowing the third computer to access the file via the first computer based on the

25   information and the path name when the first computer receives an access request for the file

26   after the file has been transferred to the second computer;

27   receiving a return request packet from the second computer and issuing a read

28   request in response, for returning the file to the first computer; and

29   receiving and storing the file in the first computer, when the file is returned to the

30   first computer from the second computer.

1   22.   (new) The method according to claim 21, further including:

2   transferring a directory belonging to the file to the second computer.

1   23.   (new) The method according to claim 21, further including:

2   transmitting the path name when the first computer receives an access request for

3   the file.

1   24.   (new) The method according to claim 21, further including:

2   storing the file into the second computer when the file is transferred from the first

3   computer to the second computer.